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Influence of rotation velocity gradient on line profiles of accretion discs of CVs

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Abstract

We show the influence of the Keplerian velocity shear on the line profiles of cataclysmic variable discs. The complete disc structure is taken into account. The radial disc structure follows the alpha disc approximation. Based on this assumption, the vertical structure is computed using the detailed non-LTE code AcDc. The obtained opacities and source functions are interpolated in the 2D grid, where the radiative transfer is calculated with the inclusion of the velocity field gradient. © International Astronomical Union 2012.

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Keywords

accretion disks, cataclysmic variables, line: formation, methods: numerical